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ABSTRACT

The extent to which second year medical students increased their positivity to psychiatry and changed their orientation toward the patient as a person, following a Behavioral Science course, was measured in two successive years. Mastery of the cognitive aspects of the course was also assessed. While performance significantly improved on the Behavioral Science part of the National Boards, no change in attitudes was demonstrated. Further study revealed that entering medical students were more negative in their attitudes toward psychiatry than was the general population and that students shared with the psychiatry department faculty a fairly negative view of patients and psychiatrists. A number of factors are proposed as sources of difficulty in promoting a humanistic orientation in the pre-clinical years. It is suggested that clues to overcoming these difficulties lie in the systematic investigation of physician-patient behavior in a natural setting, such as a doctor's office. By increasing understanding of the day-to-day practice of medicine, the focus of teaching in Behavioral Science can be directed toward those things a physician needs to know. (Author)

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AFFECTIVE OBJECTIVES IN A MEDICAL SCHOOL COURSE: REPORT OF A FAILURE*

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That part of the training of medical students which includes viewing the patient as a person has often been seen as the province of Departments of Psychiatry (Bowden and Barton, 1975; Reiser, 1973). The importance of this task can not be underestimated, and it is therefore of great concern that it start early in the training of future physicians and that it be consistently supported in the teaching of all departments (Pellegrino, 1969; 1974).

In redesigning the course offerings of the Department of Psychiatry at CMDNJ-Rutgers Medical School, the Curriculum Committee felt strongly that both the issues of patient-as-person and positivity toward psychiatry were critical to address in the second year Behavioral Science Course. These notions were stated as course objectives although they were not addressed directly as part of the teaching material. An evaluation program developed to assess the degree to which these objectives were met has been conducted over the past two years. The data from the evaluation will be discussed in this report.

It was assumed at the outset that meeting the humanistic goals of the course would be difficult for a number of reasons. First, the objectives were implicit rather than explicit (Miller, 1964). Second, students may master psychiatric information and may even learn the orientation of the Psychiatry Department to patient care, but will not necessarily become more favorable to either in spite of knowledge they have gained (Christie and Merton, 1958). Finally, the medical specialty promoting a more humanistic orientation to the patient is also a

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specialty which is held in low esteem among medical professions (Coker and Back, et. al. 1960; Light, 1974; Moos and Yaloom, 1966). Despite these discouraging factors, a belief was entertained that a well-designed course combining lectures, seminars and a wealth of information believed to be relevant to the practice of medicine could overcome the opposing forces.

Procedure

A semantic differential, patterned after that used by Nunnally (1961) to study popular conceptions of mental health, was employed to measure attitudes towards psychiatrists and patients. The concept MYSELF and several medical specialties were also included to provide a basis of comparison. A number of questions about the students' backgrounds and plans were asked as well. The measure was administered to students before and after the course in 1973-74 and 1974-75.

In the semantic differential a concept, for example, PSYCHIATRIST is followed by a number of adjective pairs which are semantic opposites.

[figure 1 about here]

The rater places a check mark on the seven-point scale between each adjective pair in the location which represents the degree to which each of the adjectives is related to the target concept. The target concepts in this study were DOCTOR, PATIENT, PSYCHIATRIST, MYSELF, and SURGEON.

Results

Semantic differential ratings of MYSELF were used as a baseline against which to judge the other concepts. It was assumed that self ratings would define the boundary between positive and negative opinions; that is, anything rated less favorably than MYSELF was negative and more favorable ratings were notably positive.

Medical student data, 1973-1974. Figure 2 presents pre-course ratings by

[figure 2 about here]

the second year students in the Fall, 1973 for the concepts PSYCHIATRIST and MYSELF. The Pearson correlation between the concepts is almost zero (r=.053, ns,[1]). On all scales, except relaxed-tense, psychiatrists are seen as having more negative

[1]All correlations presented in this report are evaluated for significance by a two-tailed test.

characteristics[1]. They are significantly (Scheffé test) more strange, insincere, mysterious, delicate, dangerous and bad. The relationship between ratings for PATIENT and MYSELF are also not significant (r=.134, ns). Patients are seen as more negative on all scales without exception and are significantly weaker, more delicate, dangerous, sick and bad. To the second year medical students studied, it would seem that each believes that patients and psychiatrists are "not like me."

Psychiatrists and patients may be unlike medical students' views of themselves but they are seen as very much like each other. The correlation between the

[figure 3 about here]

concepts is .370 and is highly significant ($p \leq .001$). Patients are rated as significantly more tense and as more sick, but not significantly so.

The intercorrelation of the concepts is presented in Table 1. The only pairs

[table 1 about here]

of concepts that are not significantly correlated are MYSELF and PSYCHIATRIST and MYSELF and PATIENT. The strongest relationship is between SURGEON and DOCTOR.

Since the ratings of MYSELF were used as a baseline for comparison it was important to look at the stability of the ratings in order to be assured that any changes following the course were not merely reflecting the unreliability of the measure. As can be seen in Figure 4 the two sets of ratings overlap almost completely (r=.468, $p \leq .001$).

[figure 4 about here]

The pre-post comparison of ratings for PSYCHIATRIST (Figure 5) shows a clearly

[figure 5 about here]

stable pattern. The two profiles are very similar and are significantly correlated (r=.303 p=.003). No scale differences were found. The average scale change pre and post was .037. Ratings of PATIENT were also quite consistent; the pre-post average scale change was only .032.

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[1] Positive adjectives are listed on the left side of the graph, negative adjectives on the right.

All of the concepts were significantly correlated pre and post, demonstrating an overall lack of change in student attitudes. For the critical concepts, those expected to be influenced by the course, no change could be demonstrated.

Medical student data, 1974-1975. The study was repeated in 1974-1975 with a few changes. The concept DOCTOR was replaced by INTERNIST to remove any ambiguity between the meanings M.D. or Ph.D. that could be attributed to the original word. Two new concepts: PSYCHOLOGIST, to allow for the differentiation of practitioners of mental health with and without medical degrees, and PHYSICIAN-PATIENT RELATIONSHIP, which specifically related to the course goal of viewing the patient as a person were included. The adjective pairs simple-complex and effective-ineffective were added to the existing scales on the Semantic Differential.

Figure 6 presents the pre-course ratings of PSYCHIATRIST and MYSELF. The

[figure 6 about here]

pattern looks much like that of the students in the previous year. The two concepts are not significantly correlated ($r=.187$, ns). Comparison of ratings of PSYCHIATRIST before and after the course corroborate the earlier finding (Figure 7) of no change

[figure 7 about here]

($r=.571$, $p \leq .001$). PSYCHIATRIST and PSYCHOLOGIST (Figure 8) are rated quite

[figure 8 about here]

similarly ($r=.596$, $p \leq .001$) although psychologists are viewed as somewhat less strange and more understandable. Apparently these two mental health professionals are equally undesirable in spite of their differences in training. The new concept INTERNIST was rated much like DOCTOR of the first study, suggesting that the students interpreted doctor to mean M.D.

The most interesting of the new concepts, PHYSICIAN-PATIENT RELATIONSHIP, was relatively unchanged by the course (pre-post correlation, $r=.571$, $p \leq .001$); however, its interrelationships with the other concepts did shift somewhat.

The correlation between the concept PATIENT with PHYSICIAN-PATIENT RELATIONSHIP

and that of the concepts naming medical specialists, could be an indication of the students' views of the relative contribution of patients and practitioners to their mutual relationship. The average correlation of the three physician concepts (SURGEON, PSYCHIATRIST, INTERNIST) with PHYSICIAN-PATIENT RELATIONSHIP was .550 ($p \leq .001$) before the course; the PATIENT correlation was .412 ($p \leq .001$). After the course the averaged ratings of physician concepts correlated .711 ($p \leq .001$) and patient .710 ($p \leq .001$) suggesting that the students came to view patients' and physicians' contributions as equal. Both before and after the course PSYCHOLOGIST is seen as least related and INTERNIST most related to the concept PHYSICIAN-PATIENT RELATIONSHIP.

Pre-course ratings of PSYCHIATRIST by the two second year classes are shown in Figure 9. None of the scales were significantly different.

[figure 9 about here]

Discussion

In attempting to understand the very minimal attitude change observed during the two years of the evaluation program, a number of questions about the students and their educational experience were raised.

An obvious possibility is that the students do not learn the material and consequently, have no basis for change. The evidence however, suggests otherwise.

In 1973-74 students took the Behavioral Science part of the National Board exams. The average pre-course score was 410 with the range from 5 to 690; post-course the average score was 487, range 150 to 720. A T test was performed to compare Fall and Spring scores and indicated that the increase was highly significant. The students also did well on the in-course examinations. The data suggests that the informational material was learned to a level sufficient to satisfy the teaching faculty and that there was also significant improvement on a nationally normed test.

In looking at knowledge gained it is important to consider background prior to taking the course. Out of 82 students responding in the Fall 1973, as many as 32 had never taken any psychology courses prior to entering medical school, 69 had never had sociology and only 8 students had ever had a course either in anthropology, education, economics or political science. Basically, the students had very little background in related fields. The lack of background in behavioral sciences is undoubtedly related to pre-med pressures as well as the lack of interest in those fields on the part of the students. However, as far as could be determined they were able to and did master the cognitive aspects of the course.

A second possible explanation for the lack of change might be related to faculty attitudes. Becker, (Becker, Geer, Hughes and Strauss, 1961) in his comprehensive study of the sociology of medical training, emphasized the socializing influences in medical school among which faculty role modelling figures importantly. Moos and Yaloom (1966) propose that the values of medical school faculty may promote a low opinion of psychiatry. In order to test this, during the Spring 1974, the members of the Department of Psychiatry who were involved in teaching the course were asked to respond to the same attitude measure that was given to the students. Comparison of the faculty ratings with those of the students in

[figure 10 about here]

the Spring 1974 revealed that there were no significant differences in their ratings of PSYCHIATRIST although the faculty were slightly more positive. The faculty see patients as more passive and colder than do students and, not surprisingly, more familiar and understandable but not significantly so. The data reveal

[figure 11 about here]

that even among the psychiatrists (10 of the 17 faculty respondents), ratings of the concepts PSYCHIATRIST and MYSELF differed, with MYSELF being more positive on most scales. Even psychiatrists seem to devalue members of their own profession and undoubtedly this is communicated to students.

Since the attitude measure used in this evaluation was similar to one employed in a study of the general public, it was possible to compare popular opinions with those of medical students (1973-74 data). Data from Nunnally's high education sub-sample (persons having two or more years of college) were examined. While the self ratings of Nunnally's sample are not dissimilar to that of the medical students Nunnally's group rates psychiatrists as consistently more positive. Unlike the

[figure 12 about here]

students, Nunnally's respondents do not see themselves as very different from psychiatrists in the sense that there is no clear positive-negative trend.

[figure 13 about here]

It may be that the selection process of medical school (both self-selection and admission requirements) may favor students who do not themselves favor psychiatry. It may also be the case that the initially humanistic and idealistic medical student that Becker describes is changed by the pressures of medical school, a statement also made by a panel of medical students (Truett, Douville, Fagel and Cunningham, 1969.) Whether entering students hold the same views as do second year medical students was investigated in the Fall 1974. The pattern of ratings for most of the concepts looks much like that of second year students: PSYCHIATRIST and PATIENT are least like MYSELF and are more negative. Both groups' views of PSYCHIATRIST are quite similar. However, in examining the ratings of

[figure 14 about here]

PHYSICIAN-PATIENT RELATIONSHIP the pattern for first year students was more similar to the second year students' post-course data. The first year students saw patients contributing more to the interaction between patient and doctor than physicians. The average correlation for the three physician concepts with PHYSICIAN-PATIENT RELATIONSHIP was .497 ($p \leq .001$) and for "patient" was .549 ($p \leq .001$). It may be that this strong patient orientation is part of the "idealism" Becker discussed and is temporarily given up during the early stages of medical training.

Summary and Future Directions

Many articles have been written arguing for the importance of promoting a humanistic orientation to the practice of medicine in the teaching of future physicians (e.g., Pellegrino, 1969; 1974). Departments of Psychiatry are often expected to take responsibility for this training (Bowden and Barton, 1975; Reiser, 1973). The extent to which a course offered to second year medical students succeeded in this goal was evaluated in the study described. Almost no evidence of success was obtained. The implications of this failure for medical education are suggested by the multiple factors opposing the affective objectives: (1) The students were not made aware of the objectives nor tested for their mastery in these areas, (2) Students entering medical school are more negative toward psychiatry than the general population, (3) The medical specialty promoting a humanistic orientation is not highly valued among medical professions, (4) The faculty themselves do not have markedly more favorable views than those held by the students, (5) Experience in medical school may favor a decrease in patient orientation, (6) while the students mastered the information presented they did not necessarily value that knowledge and consequently are not likely to employ it in practice. At least these six opposing forces need to be overcome in order to successfully promote humanism in medical care on the part of medical students.

At this point I would like to leave history behind and mention briefly some directions for the future. I am well convinced by my own research and the work of many others that Departments of Psychiatry and Behavioral Science face uphill battles in their attempts to promote the values and information which they hold dear. The problems are well documented....what about the solutions? It occurs to me that I have been looking in the wrong place - the solutions as I now see them lie outside the walls of medical schools and inside the offices of medical practitioners.

It would seem that a great deal of research energy has gone into examining the attitudinal impact on medical students of psychiatric education and yet very

little energy has gone into the systematic study of the impact on or application of psychiatric teachings in the day to day practice of medicine. The state of the problem can be succinctly summarized by the titles of two companion articles published in the Journal of Medical Economics. The first, "Psychiatry for G.P.s? Nuts!" (Seidenstein, 1964) which was followed shortly thereafter by the second, "Psychiatry for G.P.s? Sure!" (Jeffers, 1965). The two articles express fairly accurately the level of agreement among G.P.s and among those who taught them in medical school. The absence of agreement is closely tied to the absence of data on which to base a sound judgment.

I am apparently not alone in this view and I direct your attention to an article on Behavioral Science and Medical Education by Murray Wexler in the April, 1976 issue of the American Psychologist. I'd like to quote from the abstract of his article.

> The behavioral sciences often seem to fail in their teaching mission because they do not provide that information which can be "converted" into specific clinical skills that are useful in solving specific clinical problems. Recent studies of behavioral science programs at nine major medical schools underscore the fact that there is no unanimity of opinion about the material that should be taught to all medical students. Although diversity is valuable because it promotes experimentation with curricula, the behavioral sciences, particularly psychology, should develop a model of the doctor's job and clothe it with the basic and essential information required for primary patient care (p. 275).

In the past year I have begun, with the aid of medical and psychology students, to examine closely the everyday occurrences between doctors and patients. It is my belief that the clues to what is most relevant to effective patient care will be discovered through the rigorous, thorough and scientific pursuit of doctor-patient interactions in natural settings, and that this knowledge will provide a more adequate basis to increase our own effectiveness as transmitters of behavioral science and psychiatry to undergraduate medical students.

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TABLE 1

Intercorrelation of Concepts Rated on
Semantic Differential Scales
Second Year Medical Students, Fall 1973

	Doctor	Patient	Psychiatrist	Myself
Patient	.533[a]			
Psychiatrist	.494[a]	.370[a]		
Myself	.214[c]	.134	.053	
Surgeon	.723[a]	.329[a]	.374[a]	.280[b]

a = $p \leq .001$
b = $p \leq .01$
c = $p \leq .05$

Figure 1

PSYCHIATRIST

foolish___:___:___:___:___:___:___wise

intelligent___:___:___:___:___:___:___ignorant

strange___:___:___:___:___:___:___familiar

active___:___:___:___:___:___:___passive

sincere___:___:___:___:___:___:___insincere

predictable___:___:___:___:___:___:___unpredictable

weak___:___:___:___:___:___:___strong

slow___:___:___:___:___:___:___fast

understandable___:___:___:___:___:___:___mysterious

rugged___:___:___:___:___:___:___delicate

warm___:___:___:___:___:___:___cold

clean___:___:___:___:___:___:___dirty

safe___:___:___:___:___:___:___dangerous

relaxed___:___:___:___:___:___:___tense

valuable___:___:___:___:___:___:___worthless

sick___:___:___:___:___:___:___healthy

good___:___:___:___:___:___:___bad

Figure 2

Semantic Differential Profiles for the Concepts PSYCHIATRIST and Myself, Second Year Medical Students Pre-test, Fall 1973 r=.053,ns

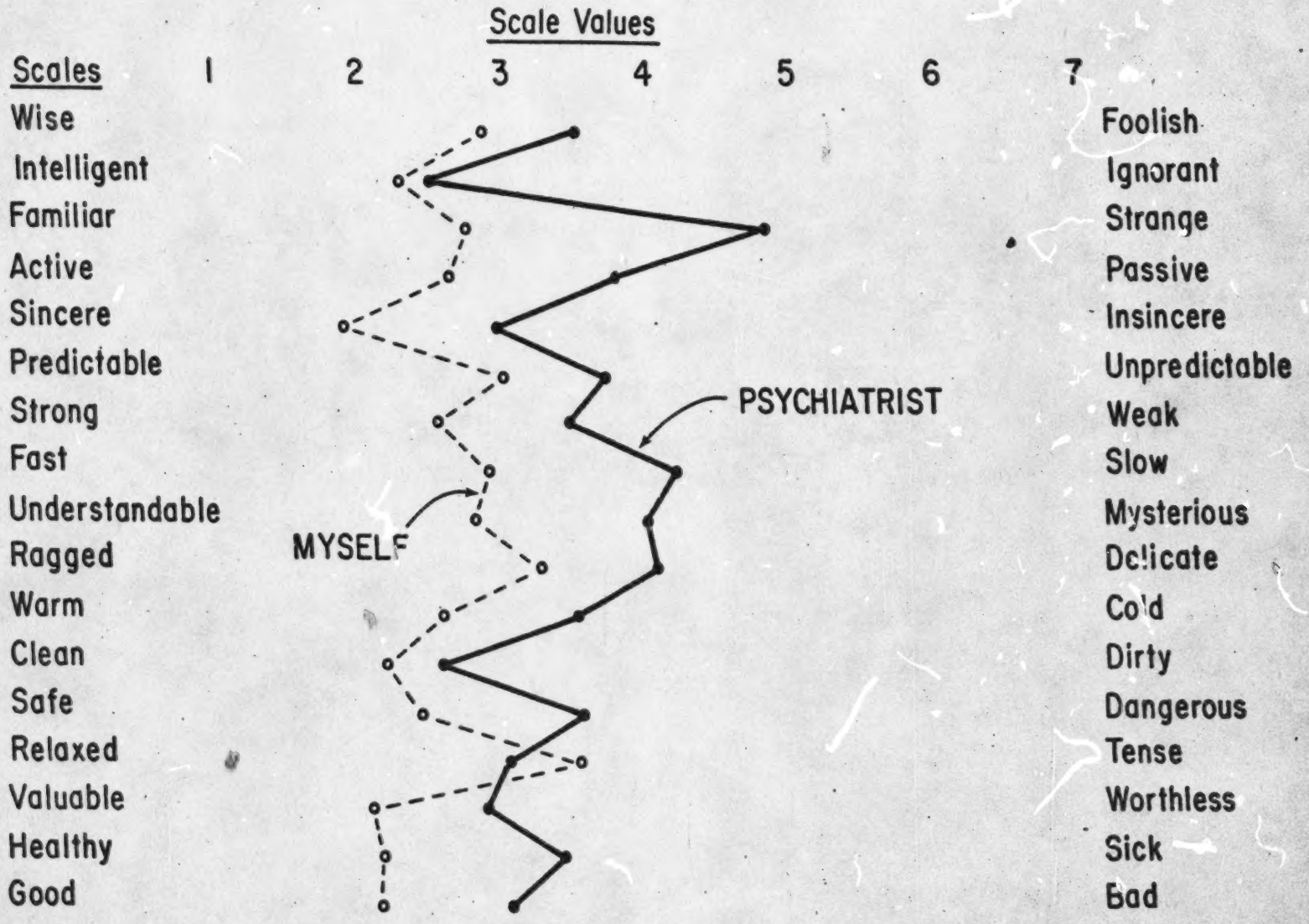


Figure 3

Semantic Differential Profiles for the Concepts PSYCHIATRIST and PATIENT, Second Year Medical Students Pre-test, Fall 1973 $r = .370, p \leq .001$

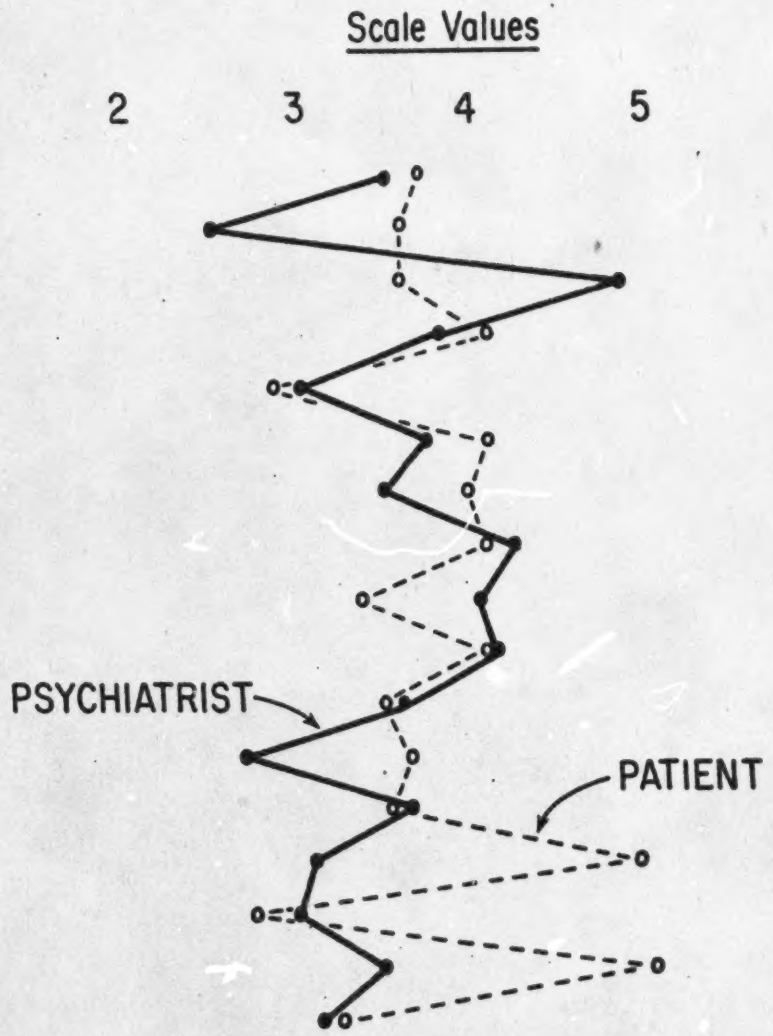


Figure 4

Semantic Differential Profiles for the Concept MYSELF Second Year Medical Students Pre-test (Fall, 1973) and Post (Spring, 1974)

Scale Values

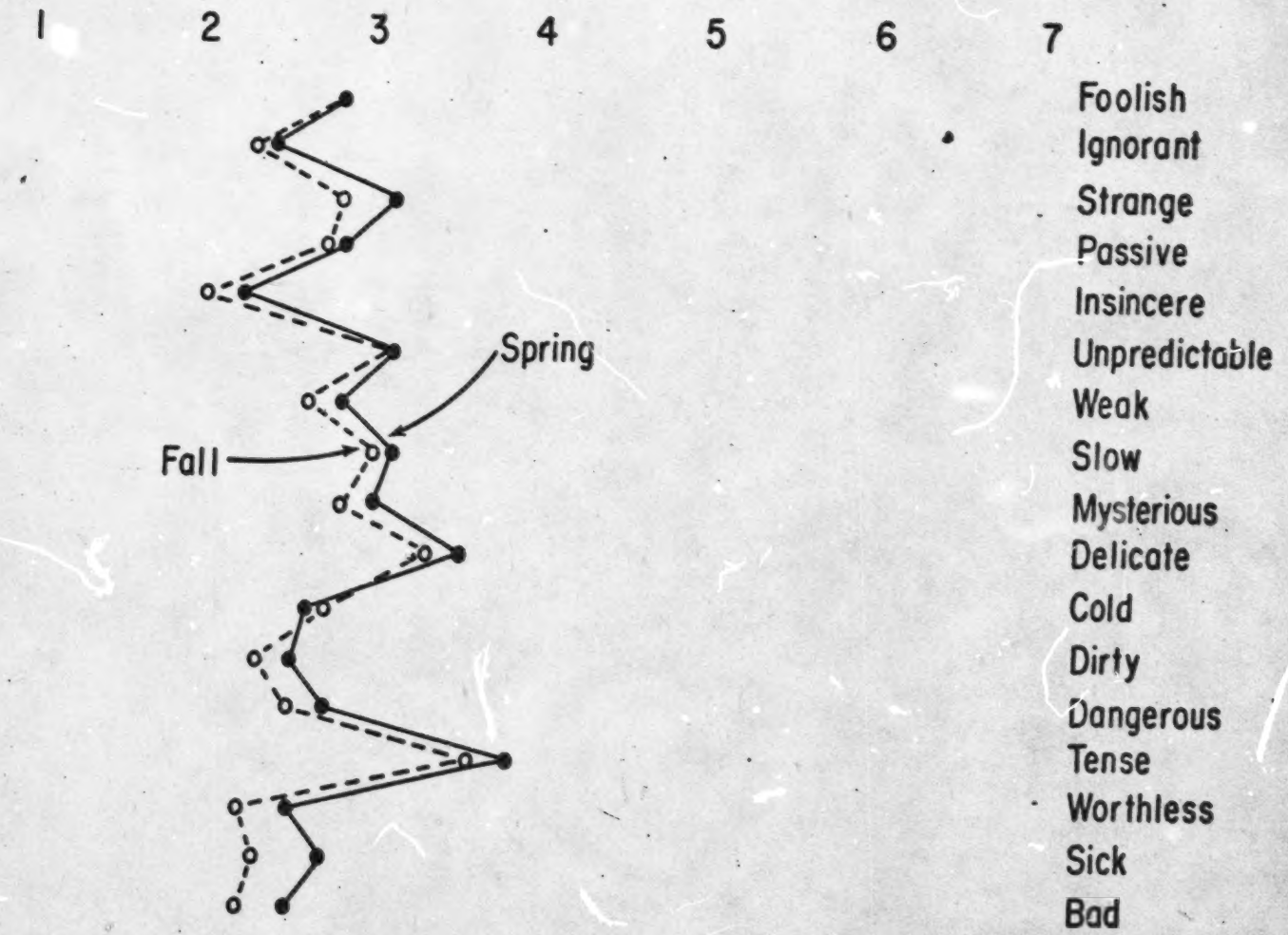
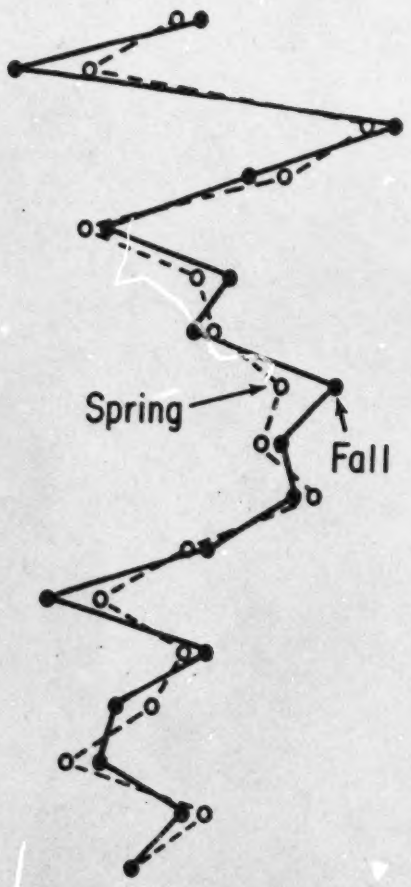


Figure 5

Semantic Differential Profiles for the Concept PSYCHIATRIST Second Year Medical Students Pre-test (Fall, 1973) and Post-test (Spring, 1974)
r=.303, p=.003
Scale Values



Scales	1	2	3	4	5	6	7	
Wise								Foolish
Intelligent								Ignorant
Familiar								Strange
Active								Passive
Sincere								Insincere
Predictable								Unpredictable
Strong								Weak
Fast								Slow
Understandable								Mysterious
Rugged								Delicate
Warm								Cold
Clean								Dirty
Safe								Dangerous
Relaxed								Tense
Valuable								Worthless
Healthy								Sick
Good								Bad

Figure 6

Semantic Differential Profiles for the Concept PSYCHIATRIST and Myself Second Year Medical Students. Fall 1974. (r = .187, ns)

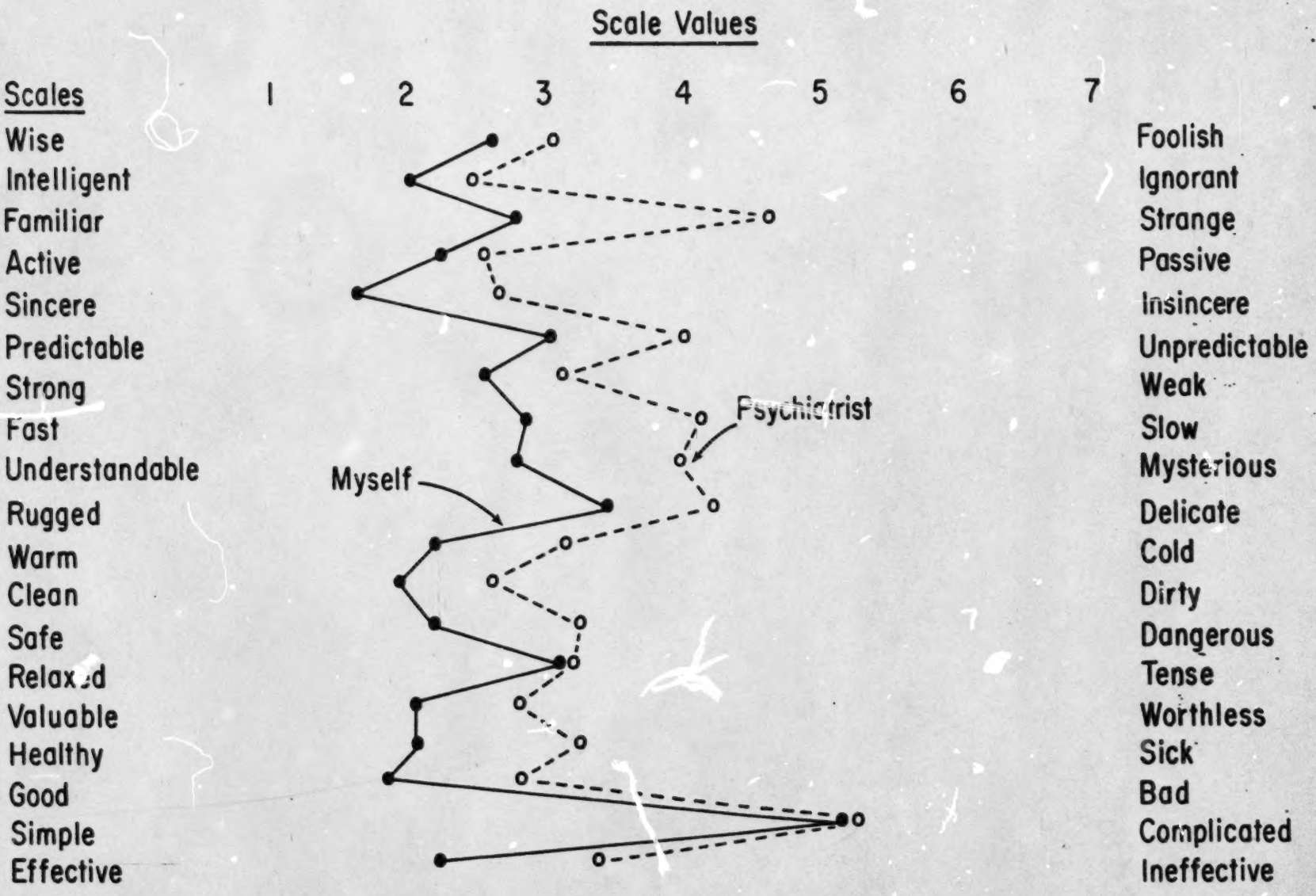


Figure 7

Semantic Differential Profiles for the Concept PSYCHIATRIST
Second Year Medical Students Fall 1974 and Winter 1975 ($r = .571, p \leq .001$)

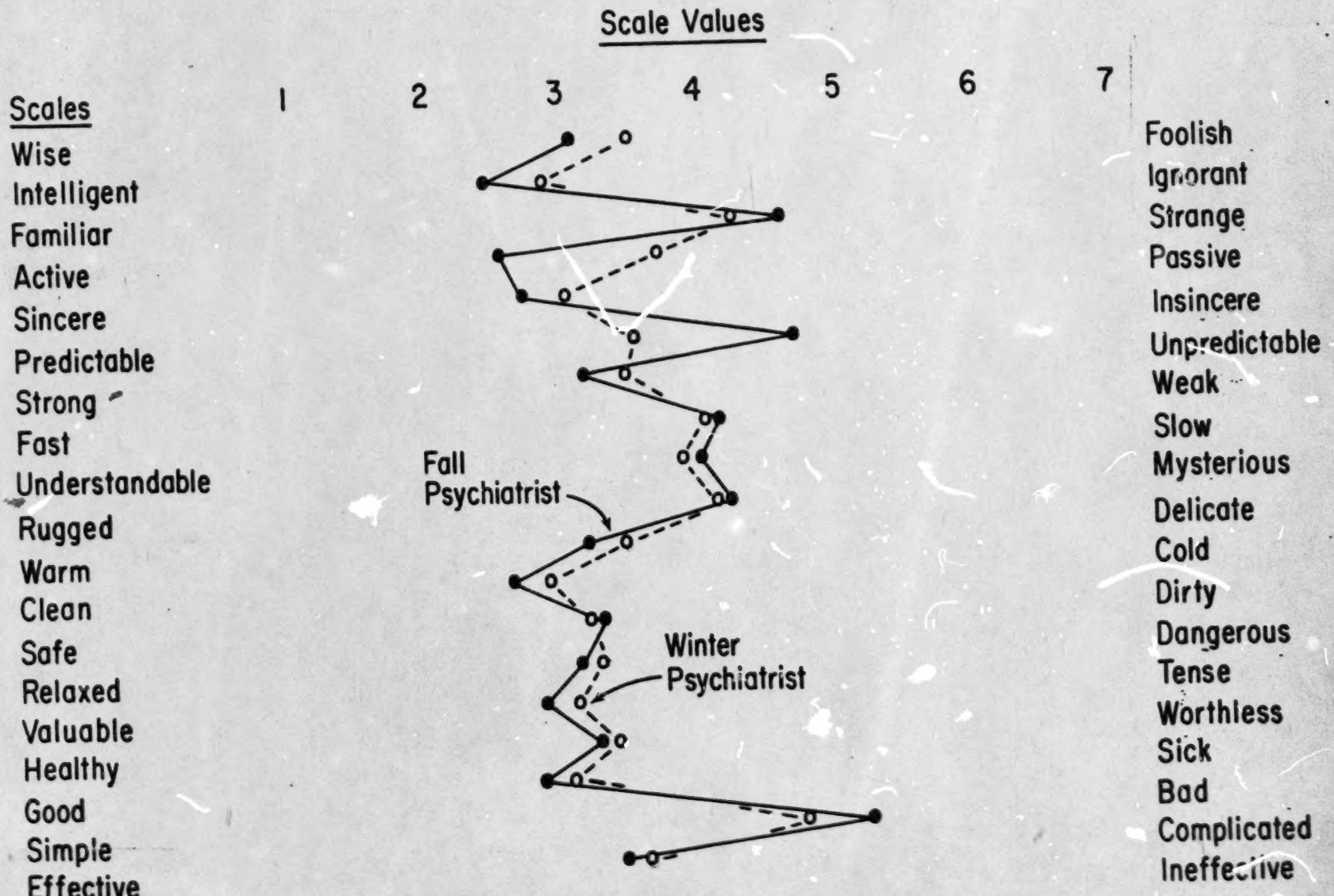


Figure 8

Semantic Differential Profiles for the Concept PSYCHIATRIST and PSYCHOLOGIST Second Year Medical Students, Fall 1974 ($r = .596, p \leq .001$)

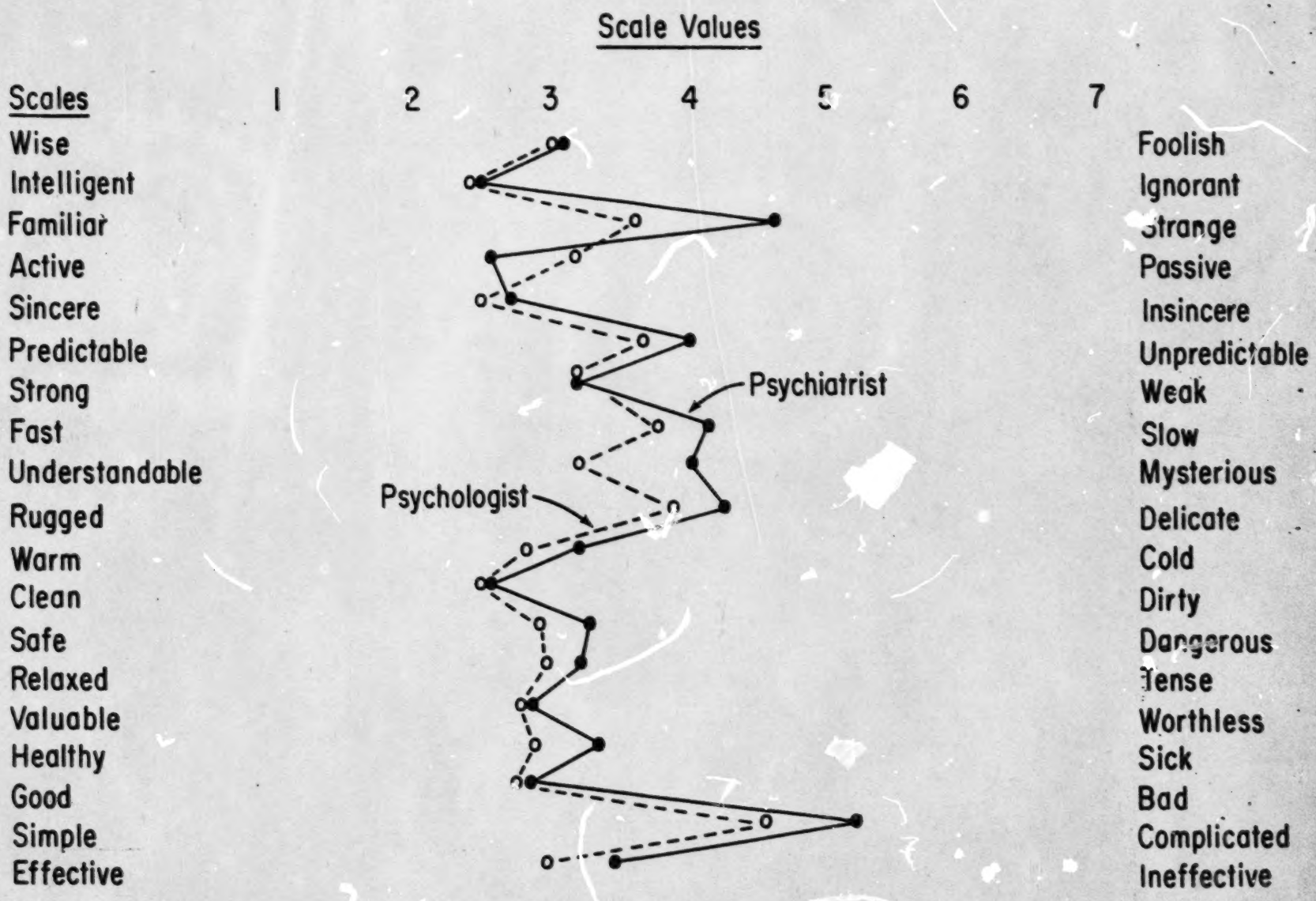


Figure 9

Semantic Differential Profiles for the Concept PSYCHIATRIST Second Year Medical Students Fall 1973 and Fall 1974.

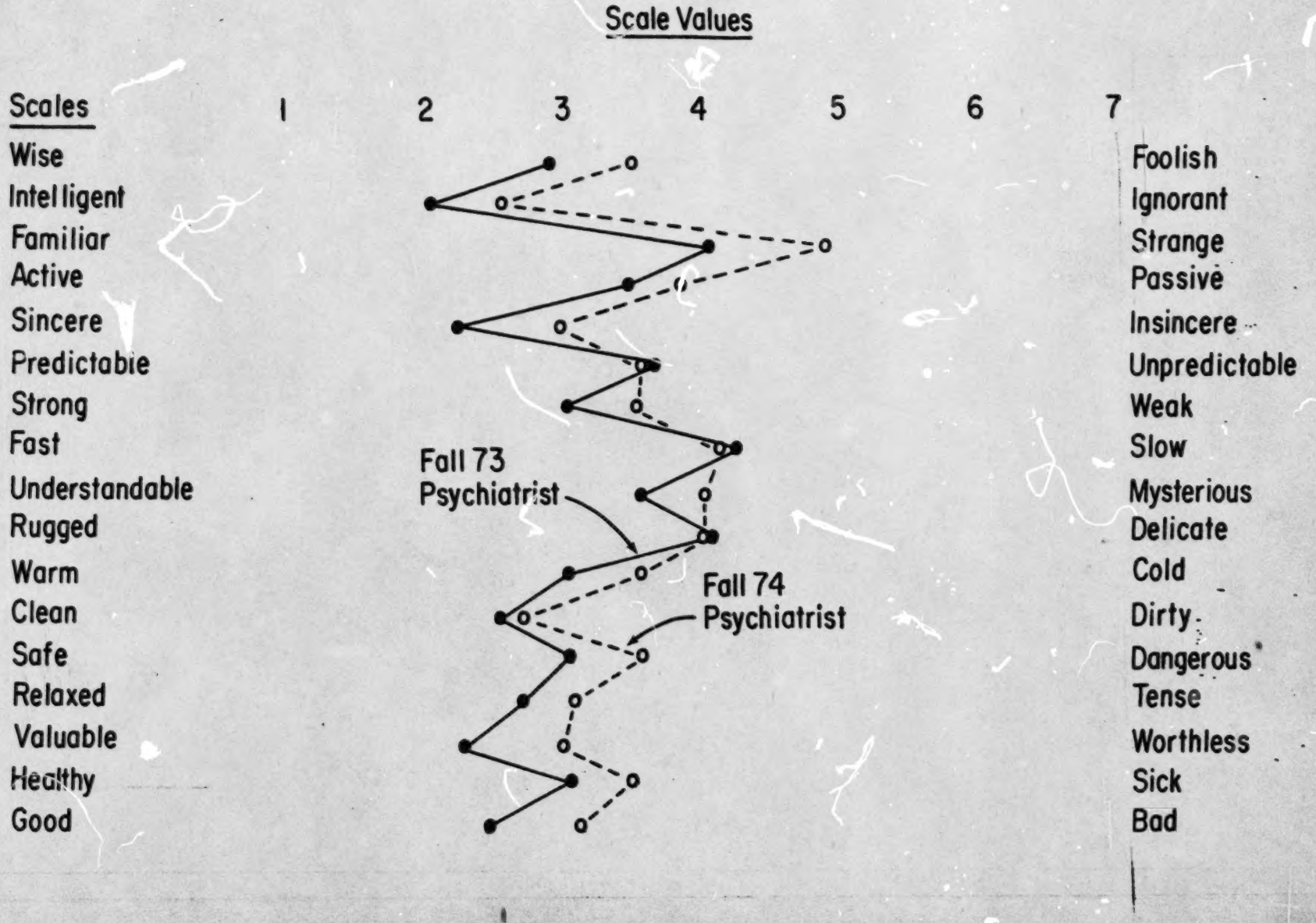


Figure 10

Semantic Differential Profiles for the Concept PSYCHIATRIST Teaching Faculty and Second Year Medical Students, Spring, 1974

Scale Values

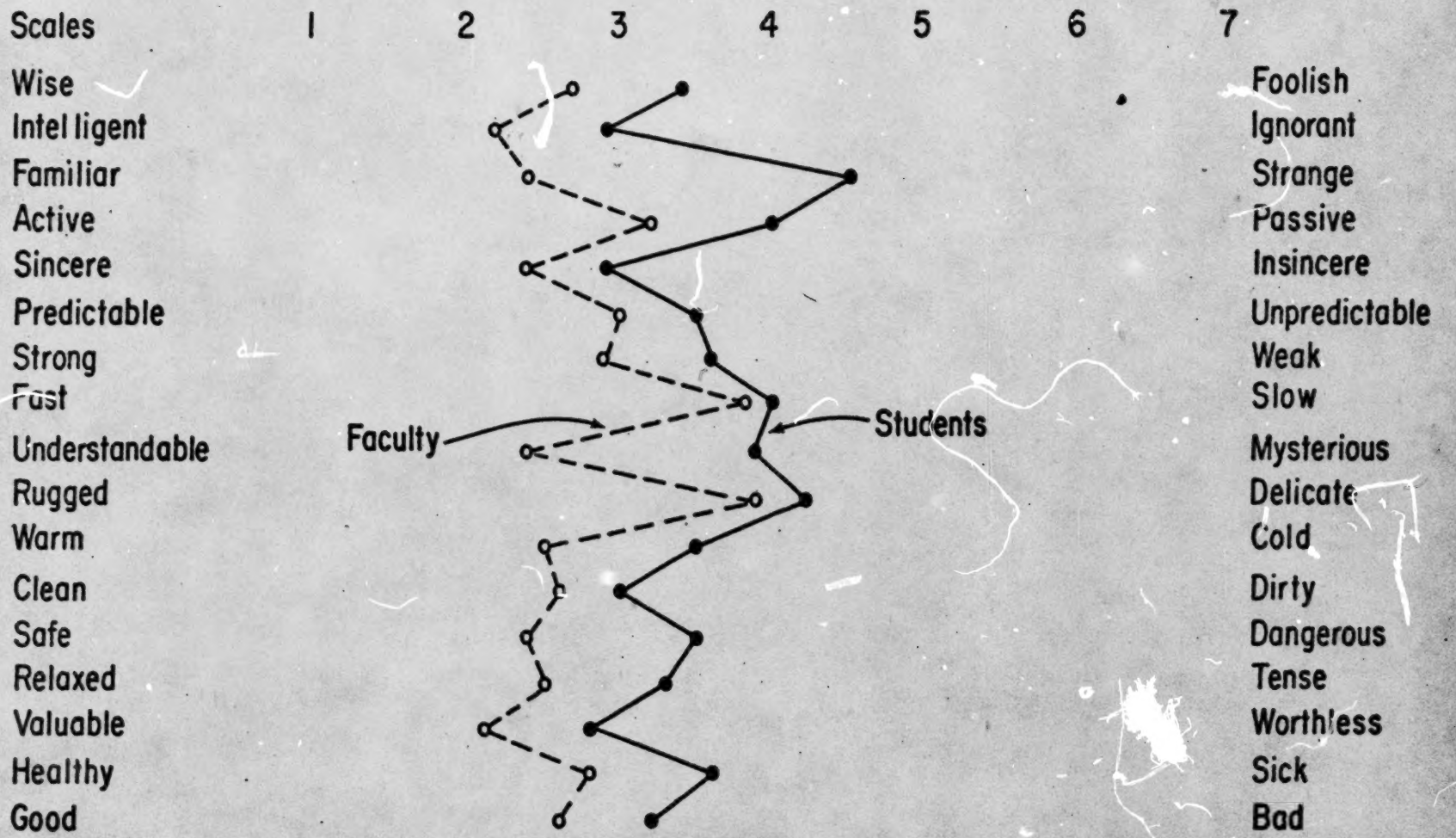


Figure 11

Semantic Differential Profiles for the Concepts PATIENT
Teaching Faculty and Second Year Medical Student, Spring 1974

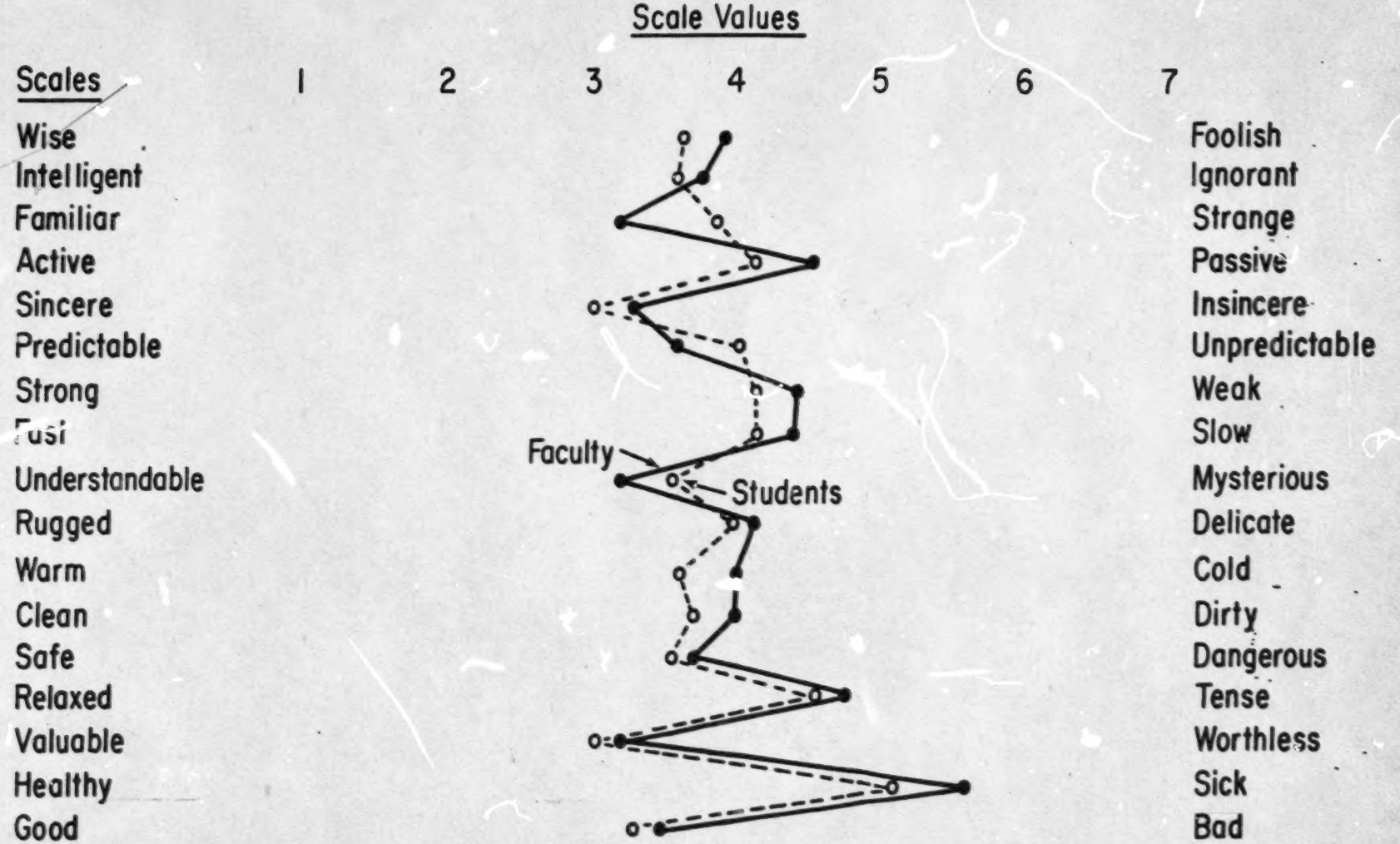
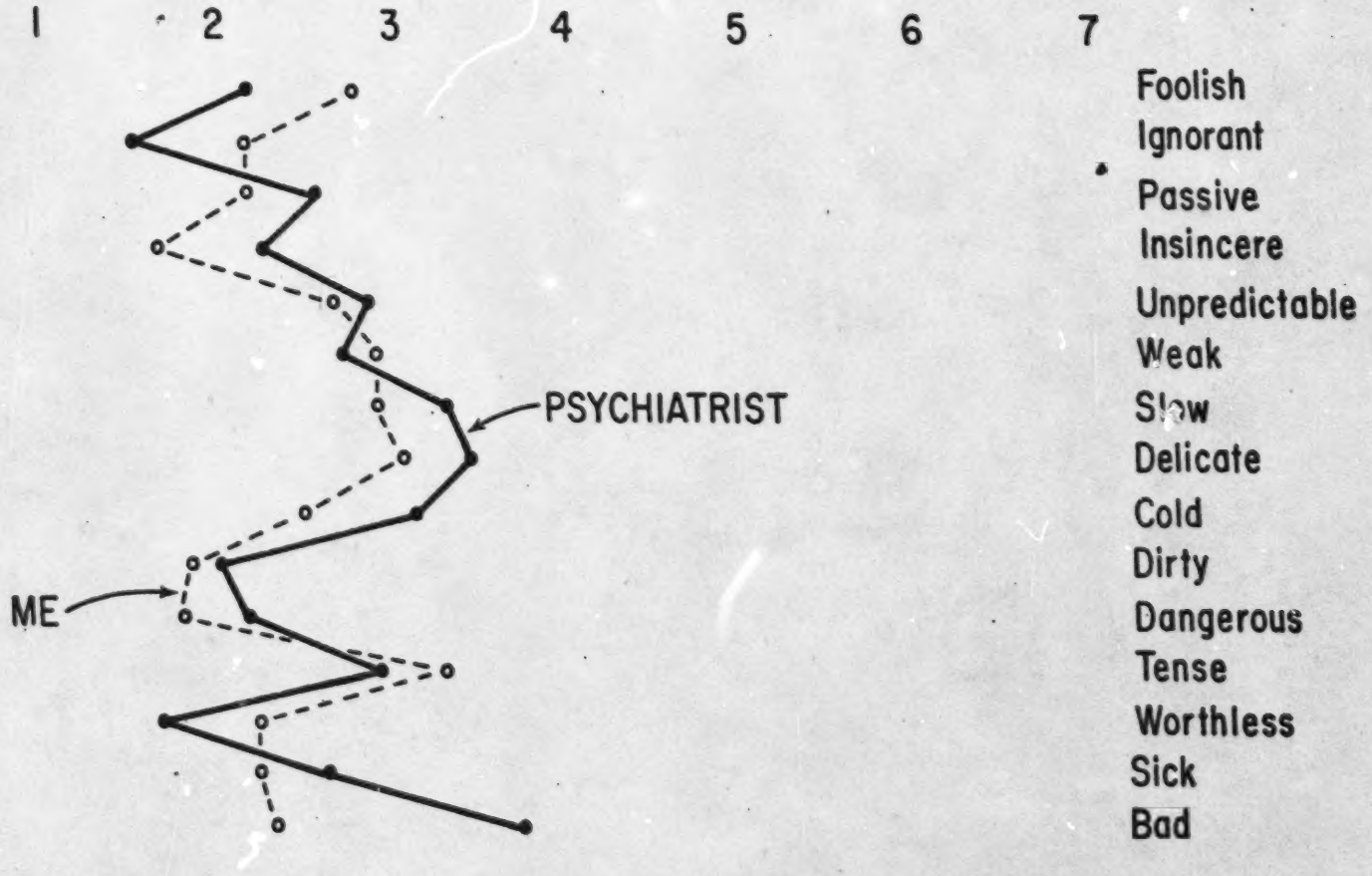


Figure 12

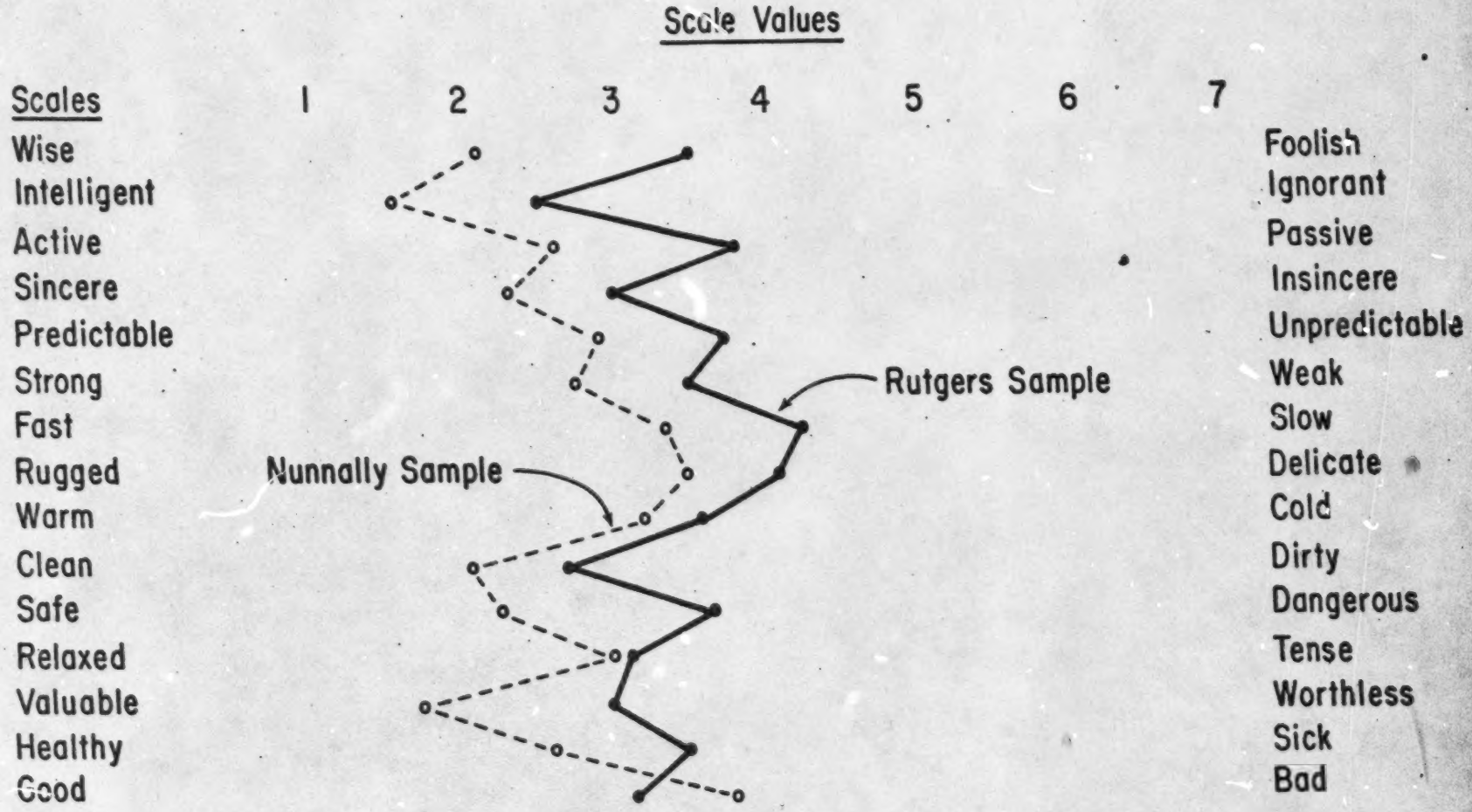
Semantic Differential Profiles for the Concepts PSYCHIATRIST and ME Nunnally samples *



* Data taken from, Nunnally Jum C. Popular Conceptions of Mental Health New York Holt, Rinehart and Winston, 1961.

Figure 13

Semantic Differential Profiles for the Concept PSYCHIATRIST,
Second Year Medical Pre-test, Fall 1973 and Nunnally High Education Sample*



* Data taken from Nunnally Jum. C. Popular Conceptions of Mental Health New York. Holt, Rinehart and Winston, 1961.

Figure 14

Semantic Differential Profiles for the Concept PSYCHIATRIST,
First and Second Year Medical Students. Fall 1974.